PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of an existing mast arm Traffic Control Signal with street lighting and interconnect at the intersection of MD 190 (River Rd) and Beech Tree Rd / Nevis Rd in Montgomery County. The existing traffic signals shall be replaced by Countdown added in Algorithm with guidible pushbuttons. signals shall be replaced by Countdown pedestrian signals with audible pushbuttons. Video detection shall be installed for all approaches. MD 190 (River Rd) is assumed to run an east-west direction.

II. INTERSECTION OPERATION

- 1. The intersection shall continue to operate in a NEMA six-phase, semi-actuated mode, with the MD 190 (River Rd) approaches running concurrently.
 The Exclusive/Permissive left turn phases for both approaches of MD 190 (River Rd) shall continue to be provided. The pedestrian phase across the east leg of MD 190 (River Rd) shall now be a Countdown pedestrian phase with audible pushbutton actuation. The Beech Tree Rd / Nevis Rd approaches shall also continue to run concurrently.
- 2. Video interface and 2-wire Control Unit shall be installed into the existing full-traffic-actuated, eight-phase controller housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.
- Montgomery County Signal Shop shall install APS control unit into controller cabinet. The APS push buttons should be delivered to Bob Ricketts at Montgomery County Traffic for programming at least two weeks prior to the beginning of work.

III. SPECIAL NOTES

- 1. The Contractor shall be responsible for terminating all signal cables, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by Montgomery County Forces. Contact Kamal Hamud at (240) 777-8761 seventy-two hours in advance of intended work.
- 3. All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.

The contacts for Montgomery County and SHA are as follows:

Ms. Anyesha Mookherjee	Mr. Richard L. Daff, Sr.
Assistant District Engineer – Traffic	Chief, Traffic Operations Division
Phone: (301) 513–7318	Phone: (410) 787–7630
Mr. Vernon Stinnett	Mr. Mike Kinney
Assistant District Engineer – Maintenance	Signal Shop (Mont Co.)
Phone: (301) 513–7304	240-777-8760
Mr. Victor Grafton	Mr. Sonny Bailey
Assistant District Engineer – Utility	Manager, Sign Shop Operations
Phone: (301) 513–7350	410-787-7670

Mr. Kamal Hamud

240-777-8761

Mont. County TMC Center

EQUIPMENT LIST

A EQUIPMENT TO BE SUPPLIED BY S.H.A..

Mr. Bob Ricketts

240-876-3681

Mont. County Traffic

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ITEM NO.	DESCRIPTION	QUAN	ITITY
9086	Video detection interface equipment: 1-4 cameras (To be installed by signal shop).	1	EA
9570	Sheet aluminum signs to consist of: (ground mount)	16.5	SF
	S1-1 "SCHOOL" sign, (30" x 30") FY/G	2	EA
	W16-7P(L) "arrow (symbolic)" diagonal sign, (12" x 24") pole mounted.	2	EA
9571	Sheet aluminum signs to consist of: (pole mount)	2	SF
	Pedestrian education R10-3(1) mod sign. (Note: Sign to read "PUSHBUTTON TO CROSS CROSS RIVER ROAD".)	2	EA

EQUIPMENT LIST (CONT.

Breakaway pedestal pole (10')

LED 16" countdown pedestrian

existing material & equipment

Video detector camera & cable

Schedule 80 rigid PVC conduit

Install overhead or ground

No. 6 AWG stranded bare copper ground wire.

2 conductor (No. 14 AWG).

5 conductor (No. 14 AWG).

7 conductor (No. 14 AWG).

EQUIPMENT TO BE REMOVED

All removed signal materials are to become property of the contractor.

Electrical cable -

Electrical cable -

Electrical cable -

Remove and dispose of

up to 4" - trenched.

signal head.

per assignment.

any length.

mounted sign.

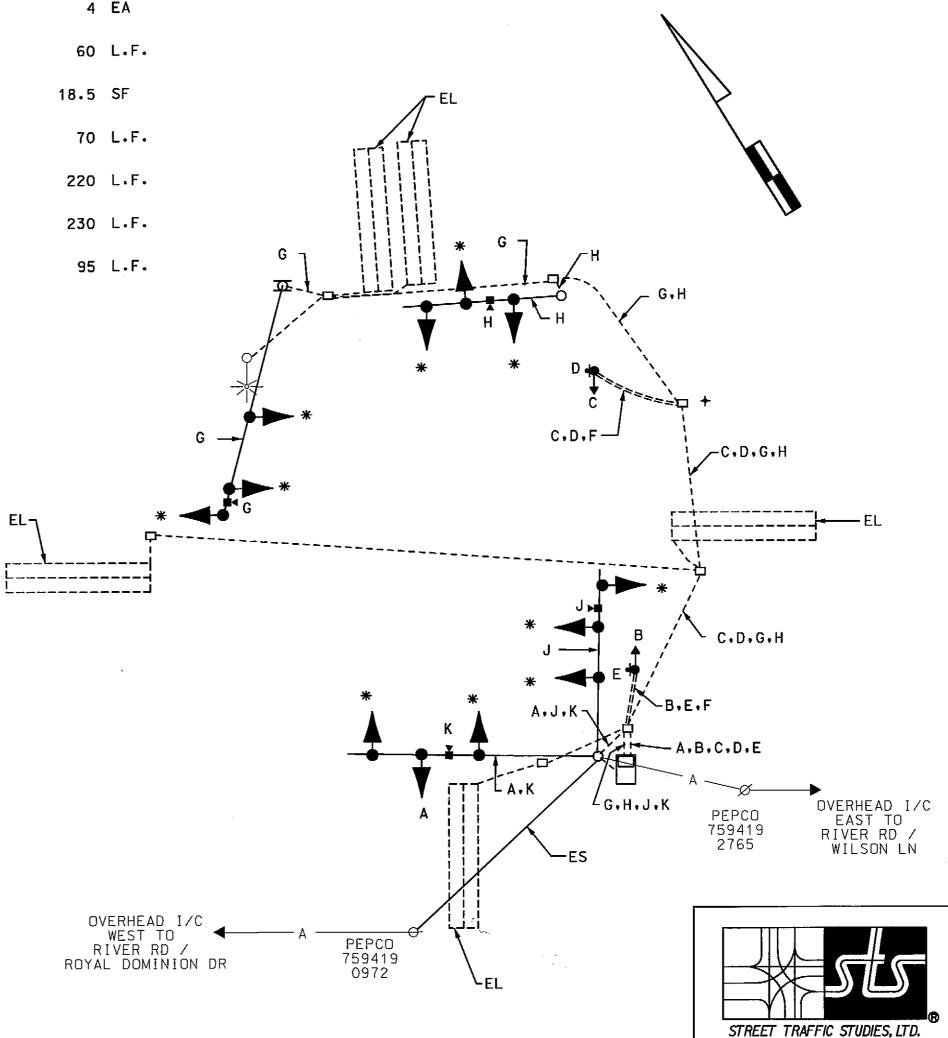
2 EA

2 EA

1 EA

В	EQUIPMENT TO BE FURNISHED AND INSTALLED	D BY THE CONTRACTOR			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
ITEM NO.	DESCRIPTION	QUANTITY			(R) (Y)(Y)	(R) (Y-)(Y)(√G-)(G	< ><	(R) (Y) (Y) (√G) (G	(R) (Y-)(Y)(4 G-)(G	(R) (Y) (G)	RYG	(R) (Y) (G)	R Y G	(R) (Y) (G)	(R) (Y)	(R) Y)	於田	%88	
1003	Maintenance of traffic per assignment.	2 EA			100 (0	$\overline{}$	$\overline{}$	4 G-/R	$\overline{}$		$\overline{}$	$\overline{}$		$\overline{}$	$\overline{}$				<u> </u>
2001	Class 2 Excavation.	2 C.Y.		PHASE 1 & 5		4 -G-/R			4 -G−/R	R	R	R	R	R	R	R	DW	DW	
2002	Test Pit Excavation	2 C.Y.		CHANGES TO PHASES 1	& 6, 2	& 5 O	R 2 & 6	,				1	r	·•					Т
5003	Removal of existing	675 L.F.	•	PHASE 1 & 6	4 -G-/G	4 -6-/6	G	R	R	R	R	R	R	R	R	R	DW	DW	
5004	pavement line markings.	510 L.F.		1 & 6 CHANGE	← Y-/G	4 -Y-/G	G	R	R	R	R	R	R	R	R	R	WD	DW	
5004	12" white permanent preformed thermoplastic pavement marking.	310 2.11 •		PHASE 2 & 5	R	R	R	4 -G-/G	4 -G-/G	G	R	R	R	R	R	R	DW	DW	→
5005	24" white permanent preformed thermoplastic pavement marking.	140 L.F.		2 & 5 CHANGE	R	R	R	4 -Y-/G	4 -Y-/G	G	R	R	R	R	R	R	DW	DW	
		·		PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R	DW	DW	<u> </u>
6001	Standard type A combination curb and gutter 12" gutter pan 8" depth.	130 L.F.		2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R	DW	DW	
6002	5" concrete sidewalk.	410 S.F.		PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	G	G	DW	D₩	
6003	Detectable warning surfaces	44 S.F.		4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y	DW	DW	- ◆↑
0005	for curb ramps.			PHASE 4 & 8 ALT	R	R	R	R	R	R	G	G	G	G	G	G	WK	WK	+
6004	Traffic barrier "W" beam using 6 foot post	10 L.F.		PED CLEAR / COUNTDOWN	R	R	R	R	R	R	G	G	G	G	G	G	FL/DW	FL/DW	▼
6006	Type K traffic barrier end treatment.	1 EA		4 & 8 ALT CHANGE	R	R	R	R	R	R	Υ	Y	Y	Y	Y	Y	DW	D₩	→ ↑
8001	12" LED signal head section.	44 EA		FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	+ +
8002	2 wire Central Control unit	1 EA		O. ERATION															→ +
8008	Audible/tactile pedestrian pushbutton station & signs.	2 EA																	

WIRING DIAGRAM



WIRING KEY

PHASE CHART

1 2 3 4 5 6 7 8 9 10 11 12 13 14

- A 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G)
- B) 5-CONDUCTOR ELECTRICAL C) CABLE (NO. 14 A.W.G)
- D) 2-CONDUCTOR ELECTRICAL E) CABLE (NO. 14 A.W.G)
- F STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- CONTROL CABLE (CAMERA TO
- *-USE EXISTING CABLE
- EL-LOOP WIRE (NO. 14 A.W.G.)
- ES-EXISTING OVERHEAD SERVICE TO BE MAINTAINED BY PEPCO
- + GROUND ROD

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

MD 190 (RIVER RD) AND BEECH TREE RD./ NEVIS RD.

BETHESDA, MARYLAND

GENERAL INFORMATION SHEET SCALE NONE DATE 2/9/11 CONTRACT NO. XX3545168R

DESIGNED BY J.W.A. COUNTY _ MONTGOMERY LOGMILE 15019012.35 DRAWN BY_ TIMS NO. ___K514 CHECKED BY TOD NO. F.A.P. NO.

Ph (410) 590-5500 Fax (410) 590-6637 TS NO. 2504E DRAWING NO. 3 OF 3 SHEET NO.

5897GI.dgn PLOTTED: \$DATETIME\$ FILE: \$FILE\$

400 Crain Hwy., N.W. Gian Burnia, MD 21061